

Application Serial No.: 10/562,558  
Amendment filed: April 22, 2009

## **REMARKS**

Applicant is submitting herewith a substitute specification in order to correct grammar and to conform the application with U.S. practice and format. No new matter has been entered. A marked-up version of the original specification is also attached for the convenience of the Examiner.

The Examiner did not consider U.S. Patent No. 4,711,478 in the Information Disclosure Statement that was filed on December 28, 2005. Applicant submits that the patent number above was incorrectly labeled in the Information Disclosure Statement due to clerical error. The correct patent number should be 4,711,418. A Supplemental Information Disclosure Statement is submitted herewith, which correctly cites U.S. Patent No. 4,711,418 (Aver, Jr. et al.).

Claims 1-14 have been amended. All of the amendments are fully supported by the original disclosure of this application (in at least the original claims and drawings) and therefore do not constitute the introduction of any new matter into this case. With regard to the amendments to claim 1, support thereof is provided in at least pages paragraphs 71 and 72 of the original specification (as published as US 2007/0100517 A1). The claims have been amended to improve grammar and in accord with U.S. practice and format.

Claims 1-14 remain pending upon entry of the amendments, with claim 1 being independent.

It is noted that the Examiner has not indicated whether the drawings as filed are accepted or objected to. In the absence of any such notification, it is presumed

Application Serial No.: 10/562,558  
Amendment filed: April 22, 2009

that the drawings as filed are acceptable to the Examiner.

### **Claim Objections**

Claim 6 has been amended to delete "DB".

Claim 8 has been amended to correct grammar and in accord with U.S. practice and format.

Withdrawal of the objection to claims 6 and 8 is requested.

### **Rejection of claim 10 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement**

Claim 10 has been amended to refer to a "click generator", instead of a "cluck generator". The original terminology refers to a signal generator, such as a "click generator". In view of the amendments to claim 10, withdrawal of this rejection is requested.

### **Rejection of claims 10, 12 and 14 under 35 U.S.C. § 112, second paragraph, as being indefinite**

As stated above, claim 10 has been amended to refer to a "click generator", instead of a "cluck generator". Withdrawal of this rejection is requested.

With regard to claim 12, the term "broadband" corresponds to its ordinary meaning and is mentioned in at least paragraphs 46 and 78 of the original

specification (as published in US 2007/0100517 A1). A further definition of "broadband" is believed not to be necessary. In claim 12, "broadband data communication" can refer to data communication that occurs across a relatively wide range of frequencies and/or at a high data rate. Withdrawal of this rejection is requested.

With regard to claim 14, the objected terminology has been deleted. Withdrawal of this rejection is requested.

**Rejection of claims 1-10 and 12-14 under 35 U.S.C. § 103(a) as being unpatentable over US 2004/0006413 (Kane) in view of US 2004/0267415 (Lacote) and US 2005/0024198 (Ward)**

Applicant respectfully traverses this rejection.

With regard to the base reference cited by the Examiner, Kane teaches a train control system with a positioning system at the front and end cars of the train so that it can be determined that no cars have become detached. The positioning system at the end of the train verifies that the entire train has cleared a block. The Examiner acknowledged that Kane does not disclose the use of balises or the onboard coil and oscillator.

The Examiner cited the reference to Lacote, which relates to a method for controlling trains in which the location and speed of a train on a line is acquired, for the sole purpose of teaching the use of balises. The Examiner cited the reference to Ward, which relates to an interrogator for an inductively coupled identification system, for the sole purpose of teaching an onboard coil and oscillator.

Independent claim 1, as amended, recites, in part, the following:

wherein an optimum frequency to transmit information from the K-Balise to the on-board equipment is selected by the automatic train protection stop (ATPS) device based on data that is to be transferred and time period that is available to make the data transfer.

In an exemplary embodiment of the present application, once communication is initiated between the K-balise and the on-board equipment, an optimum frequency to transmit information from the K-Balise to the on-board equipment is selected by the automatic train protection stop (ATPS) device, based on the data that must be transferred from the K-Balise to the on-board equipment and the time period that is available to make the data transfer. In the prior art devices, the communication speed and distance of communication is dependent on the frequency that is set, and communication speed can be very slow, especially at a low frequency (see Description of Related Art section of the original specification). An exemplary embodiment of the present application overcomes the deficiencies of the prior art.

None of the cited references, alone or in any combination thereof, teaches, suggests or predicts the elements above, in conjunction with the other claimed elements. Withdrawal of the rejection of independent claim 1 is respectfully requested, as well as the rejection of claims 2-10 and 12-14 that depend from claim 1.

**Rejection of claim 11 under 35 U.S.C. § 103(a) as being unpatentable over US Kane in view of Lacote and Ward, and in further view of U.S. 6,823,242 (Ralph)**

Application Serial No.: 10/562,558  
Amendment filed: April 22, 2009

Applicant respectfully traverses this rejection. The Examiner cited the reference to Ralph for the sole purpose of teaching a voice output alarm device, as claimed in claim 11. Applicant notes that even if Ralph were to teach that which is alleged, Ward does not cure the deficiencies of Kane as modified by Lacote and Ward, with regard to independent claim 1, from which claim 11 depends.

Therefore, withdrawal of the rejection of claim 11 is respectfully requested.

### **Conclusion**

In view of the above, it is believed that the above-identified application is in condition for allowance, and notice to that effect is respectfully requested. Should the Examiner have any questions, the Examiner is encouraged to contact the undersigned at the telephone number indicated below.

Application Serial No.: 10/562,558  
Amendment filed: April 22, 2009

The Commissioner is authorized to charge any fees or credit any overpayments which may be incurred in connection with this paper to Deposit Account No. 18-2220.

Respectfully submitted,

Date: April 22, 2009

A handwritten signature in black ink, appearing to read 'Wonki K. Park', written over a horizontal line.

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